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IS 4650 (1968): wooden anvil blocks [CED 9: Timber and Timber Stores]



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“Knowledge is such a treasure which cannot be stolen”

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IS : 4650 - 1968
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Indian Standard
SPECIFICATION FOR
WOODEN ANVIL BLOCKS

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR WOODEN ANVIL BLOCKS

Timber Stores Sectional Committee, BDC 33

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**INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 1**

AMENDMENT NO. 1 AUGUST 1975

TO

**IS : 4650-1968 SPECIFICATION FOR
WOODEN ANVIL BLOCKS**

Addenda

(*Page 3, clause 3.4*) — Add the following new clause after 3.4:

'3.5 Stapples Securing Anvil — Stapples shall be made of forged steel flat 6 mm thick.'

(*Page 6, clause 4.3.1*) — Add the following new clause after 4.3.1:

'4.3.2 Two stapples of the dimensions and shape shown in Fig 1 shall be supplied with the anvil block size No. 1 (for 12 kg anvil) for local fitting of anvils.'

(BDC33)



AMENDMENT NO. 2 DECEMBER 1981

TO

IS : 4650 - 1968 SPECIFICATION FOR WOODEN ANVIL BLOCKS

Alterations

(Page 2, clause 2.0, line 3) — Substitute ' IS : 707-1976† ' for ' IS : 707-1958‡ '.

(Page 2, foot-note with ' ‡ ' mark) — Substitute the following for the existing foot-note:

' ‡Glossary of terms applicable to timber technology and utilization (second revision).'

(Page 3, clause 3.1.2, second sentence) — Delete the following matter: 'or any other defect which would reduce the life or utility of the anvil block.'

(Page 3, clause 3.2.1, line 2) — Substitute ' IS : 1977-1975* ' for ' IS : 1977-1962* '.

(Page 3, clause 3.3) — Substitute the following for the existing clause:

'3.3 Screws — Wood Screw No. 14 and 55 mm length conforming to IS : 6760-1972†.'

(Page 3, clause 3.4, line 2) — Substitute ' IS : 1363-1967‡ ' for ' IS : 1363-1960‡ '.

(Page 3, foot-notes with ' * ', ' † ' and ' ‡ ' marks) — Substitute the following for the existing foot-notes:

*Specification for structural steel (ordinary quality) (second revision).

†Specification for slotted countersunk head wood screws.

‡Specification for black hexagon bolts, nuts and lock nuts (diameter 6 to 39 mm) and black hexagon screws (diameter 6 to 24 mm) (first revision).'

(Page 8, clause 8.1, line 3) — Substitute ' IS : 1593-1971† ' for ' IS : 1593-1960† '.

(Page 8, foot-note with ' † ' mark) — Substitute the following for the existing foot-note:

'†Specification for fuel oils (first revision).'

(BDC 33)

Indian Standard

SPECIFICATION FOR WOODEN ANVIL BLOCKS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 22 February 1968, after the draft finalized by the Timber Stores Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 The blacksmith's anvils covered by IS : 510-1964* are used mostly in smithy shops and the anvils without spikes are supported on wooden blocks for which no standard exists. Since these wooden blocks are being manufactured and used in various designs and sizes, this standard attempts to simplify the large number of existing designs and sizes of the wooden blocks in use with the anvils.

0.3 In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers the requirements for wooden anvil blocks for use with cast steel blacksmith's anvils without spikes conforming to Fig. 3 and Table 1 of IS : 510-1964*.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definitions shall apply and for definitions other than those given below, reference may be made to IS : 707-1958‡.

*Specification for blacksmith's anvils (cast steel) (*revised*).

†Rules for rounding off numerical values (*revised*).

‡Glossary of terms applicable to timber, plywood and joinery.

2.1 Anvil — A block of iron with or without spike on which a blacksmith works (hammers) to shape articles.

2.2 Anvil Block — A wooden block for supporting an anvil.

3. MATERIALS

3.0 The anvil blocks shall be manufactured from the materials specified in 3.1 to 3.4.

3.1 Timber

3.1.1 Any of the species of timber listed in Appendix A shall be used.

3.1.2 The timber shall be seasoned to a moisture-content not exceeding 18 percent within a depth of 10 mm from the surface and the inclination of the grain shall not exceed 1 in 12. The timber shall be free from centre-heart (pith), live insect attack, any kind of decay (rot), dead knots, splits, shakes, warp or any other defect which would reduce the life or utility of the anvil block.

3.1.3 Sound sapwood shall be permissible up to 20 percent of any cross section of any plank or block.

3.2 Bands

3.2.1 The bands shall be made of mild steel flat 5 mm thick conforming to IS : 1977-1962*.

3.3 Screws — Mild steel countersunk head 55 mm long gauge No. 14 conforming to IS : 451-1961†.

3.4 Bolts — Black hexagonal bolts 13 mm dia and 50 mm long with hexagonal nuts and 2 washers conforming to IS : 1363-1960‡.

4. MANUFACTURE

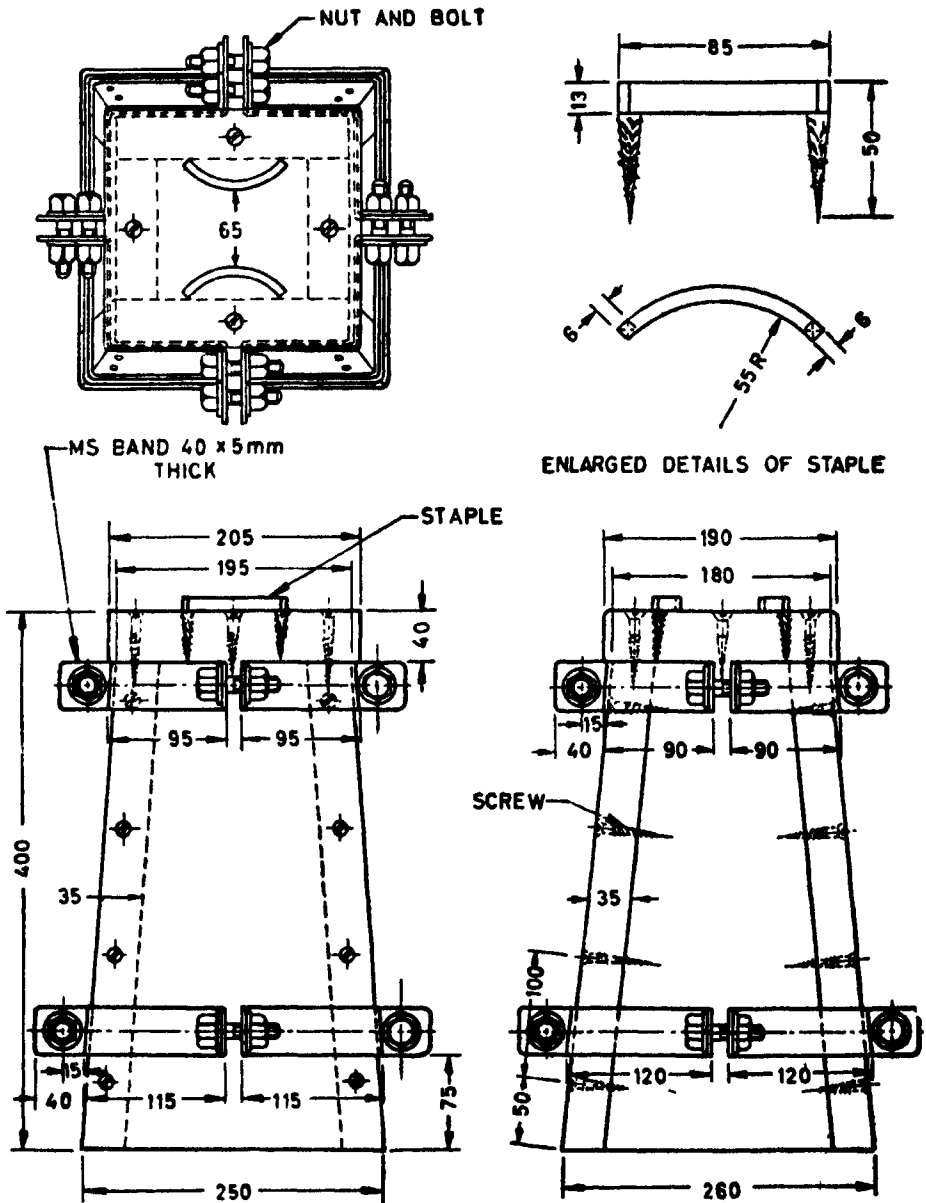
4.1 The anvil blocks shall be manufactured generally to the shape and design as shown in Fig. 1 to 4. The grain of timber shall run parallel to the longest dimension of the block.

4.2 As far as possible, only one specie of timber shall be used in the manufacture of any one block. However, if necessary, mixed timbers of approximately the same weight class may be used.

*Specification for structural steel (ordinary quality).

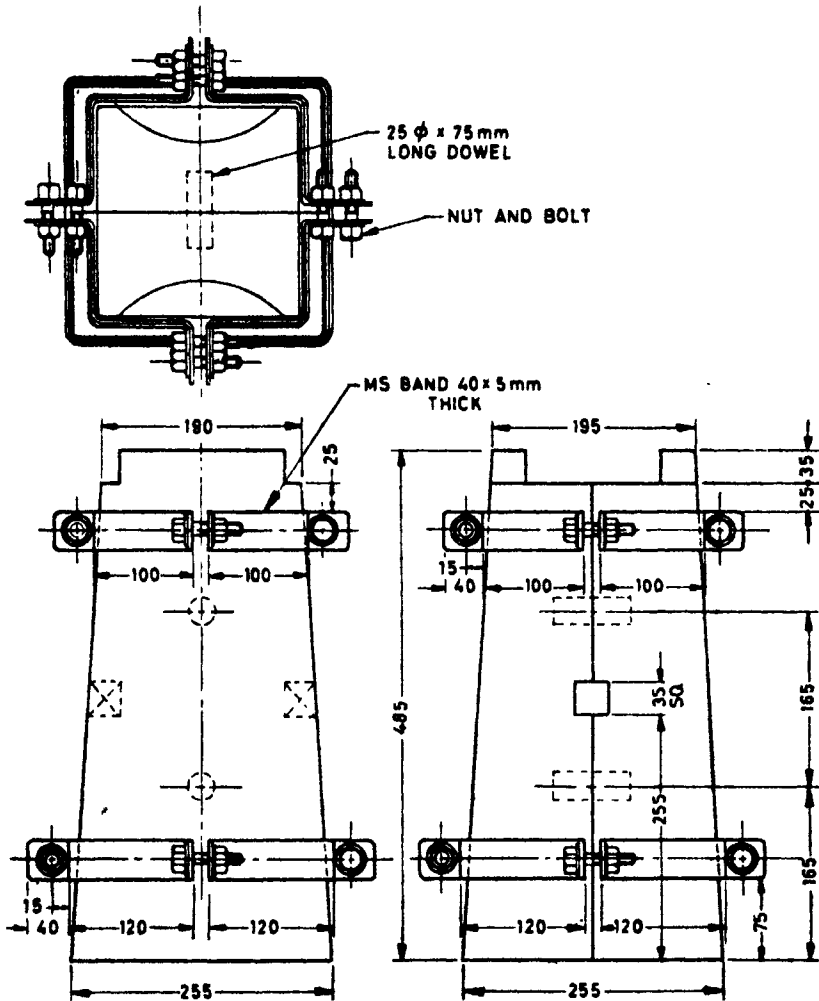
†Specification for wood screws.

‡Specification for black hexagonal bolts (6 to 39 mm) with nuts and black hexagonal screws (6 to 24 mm).



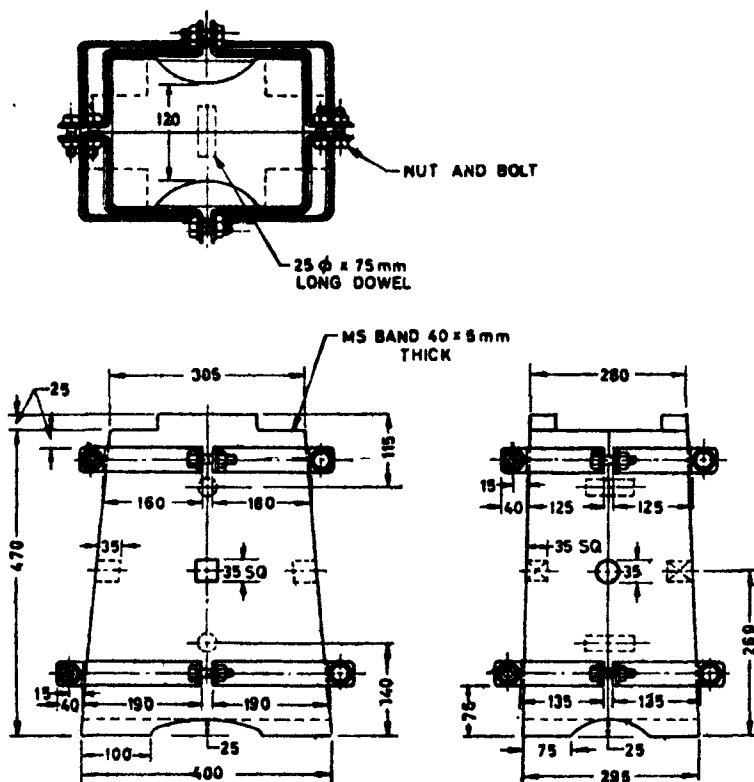
All dimensions in millimetres.

FIG. 1 ANVIL BLOCK No. 1 (FOR 12 kg ANVIL)



All dimensions in millimetres.

FIG. 2 ANVIL BLOCK No. 2
(FOR 25 kg ANVIL)



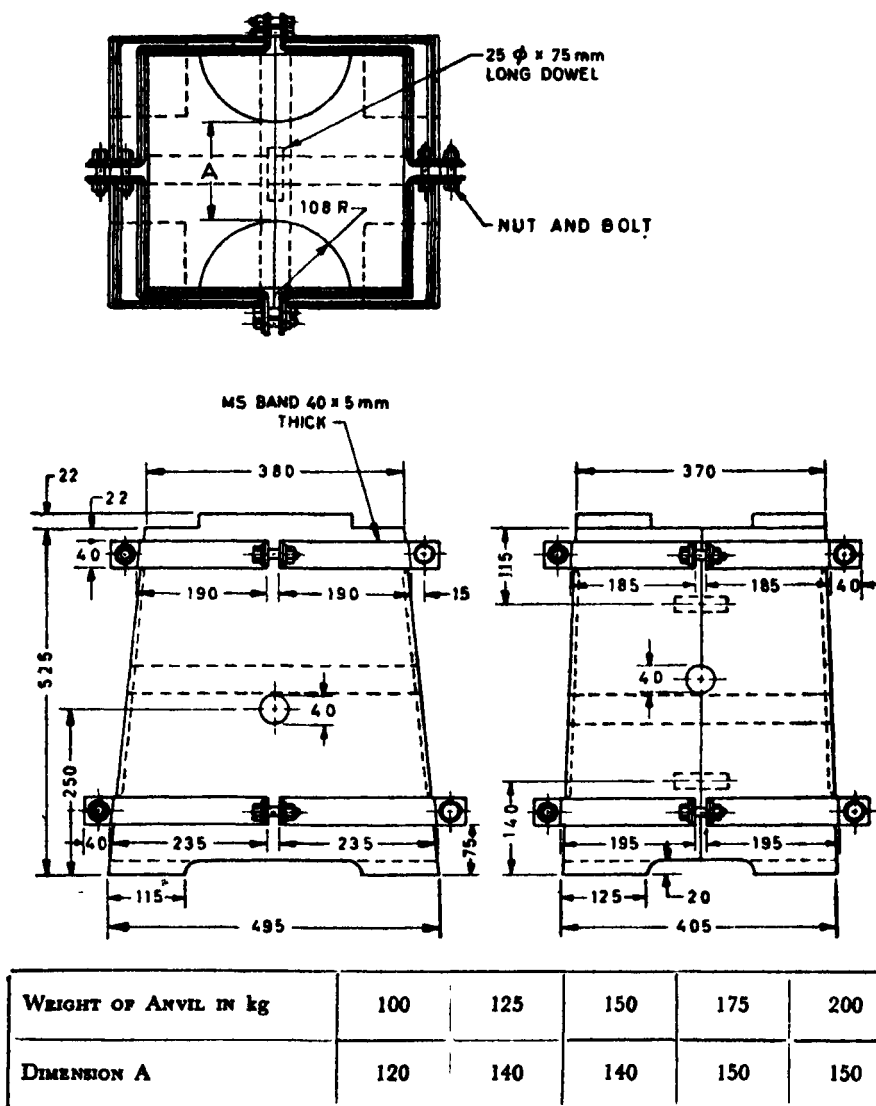
All dimensions in millimetres.

FIG. 3 ANVIL BLOCK No. 3
(FOR 50, 63 AND 75 kg ANVIL)

4.3 The anvil blocks, except size No. 1, shall be manufactured either in 1-piece or in 2-piece construction. If in 2-piece construction, the two pieces of timber shall be firmly pinned together heart-face to heart-face by two 75 mm long \times 25 mm diameter cylindrical dowels firmly glued in position as shown in Fig. 2 to 4.

4.3.1 Anvil block size No. 1 shall be made up of 5 wooden planks firmly secured to each other by screws (see Fig. 1).

4.4 The blocks shall be provided with two metal bands which shall be positioned and fixed near the top and bottom of the block, as shown in Fig. 1 to 4. The ends of the two bands, when drawn tight, shall be at least 15 mm apart.



All dimensions in millimetres.

FIG. 4 ANVIL BLOCK No. 4
(FOR 100, 125, 150, 175 AND 200 kg ANVILS)

IS : 4650 - 1968

4.5 Before assembly, the metal components shall be oil blackened.

5. WORKMANSHIP AND FINISH

5.1 All corners shall be rounded off and the edges slightly chamfered. The blocks shall be finished smooth all over.

5.2 The metal components shall be free from rust and sharp edges.

6. DIMENSIONS

6.1 The blocks shall generally conform to the dimensions as shown in Fig. 1 to 4.

7. SIZES

7.1 The sizes of anvil blocks shall be as follows:

<i>Size (No.) of Anvil Block</i>	<i>Weight of Anvil, kg</i>
1	12
2	25
3	50, 63 and 75
4	100, 125, 150, 175 and 200

8. PRESERVATION

8.1 After inspection, the anvil blocks shall be liberally swabbed with a hot mixture of creosote and fuel oil (Grade iv) 50:50 *v/v* conforming to IS : 218-1961* and IS : 1593-1960† respectively and this shall be repeated again after 24 hours or before despatch whichever is earlier.

9. MARKING

9.1 Each anvil block shall be legibly and indelibly marked with the manufacturer's name or initials or recognised trade-mark, the year of manufacture and the size of the block as shown in Fig. 1 to 4.

9.2 The anvil blocks may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

*Specification for creosote and anthracene oil for use as wood preservatives (*revised*).

†Specification for fuel oils.

APPENDIX A

(Clause 3.1.1)

SPECIES OF TIMBER SUITABLE FOR ANVIL BLOCKS

BOTANICAL NAME	TRADE NAME
<i>Acacia arabica</i>	Babul
<i>Acacia catechu</i>	Safed Khair
<i>Amora</i> sp.	Amari
<i>Anogeissus acuminata</i>	Yon
<i>Anogeissus latifolia</i>	Axlewood (Bakli)
<i>Chukrasia tabularis</i>	Chickrassy
<i>Dalbergia sissoo</i>	Sissoo
<i>Diospyros</i> sp.	Dhula
<i>Dipterocarpus</i> spp.	Gurjan
<i>Eucalyptus</i> sp.	Eucalyptus
<i>Grewia</i> spp.	Dhaman
<i>Hardwickia binata</i>	Anjan
<i>Heritiera</i> spp.	Sundri
<i>Hopea</i> spp.	Hopea
<i>Mesua ferrea</i>	Mesua
<i>Mimusops</i> spp.	Bulletwood
<i>Ougeinia oojeinensis</i>	Sandan
<i>Pterocarpus marsupium</i>	Bijasal
<i>Quercus</i> spp.	Indian oak
<i>Schleicherā oleosa</i>	Kusum
<i>Shorea robusta</i>	Sal
<i>Syzygium</i> sp.	Jaman
<i>Terminalia arjuna</i>	Arjun
<i>Terminalia tomentosa</i>	Laurel
<i>Xylia xylocarpa</i>	Irul

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